Front Sweeper FK 105

A08
FORM NO. 769-03278A

EN

MTD Products Aktiengesellschaft • Saarbrücken • Germany

Table of Contents

Contents: ..... Page

Unpacking / Mounting 3
For your safety 3
Use the machine properly 4
Signs on the machine 5
Maintenance 5
Technical data 5
Warranty 5
Assembly 6
Mounting 10
Removal 12
Storage / Not in use 12
Operation 13
Spare parts list 14

The Front Sweeper Type FS 102/33 described below is only suitable for attachment to lawn tractors in the series 48../49../50.. and 51...

Identification of the model number:
The type plate is located under the driver's seat. The fifth and sixth positions of the model number are the series.
Example: Model number l3BW506N690 = 50.. Series
Model number 13AT491N684 = 49.. Series

Unpacking / Mounting

⚠ ***Danger of injury***

Before mounting the machine
- stop the engine of the lawn tractor,
- remove the ignition key
- wait until all moving parts have come to a complete stop; the engine must be cooled down
- engage the parking brake
- remove the spark plug connectors on the lawn tractor so that accidental starting of the engine is not possible.

⚠ ***Danger of burns***

Let the exhaust cool down before mounting the machine.

Preparations on the lawn tractor

Remove attachments (e.g. front bumper) from the front of the lawn tractor.

For your safety

Observe safety and operating instructions. Read these instructions carefully before using the machine for the first time. Observe all safety instructions during operation. Ensure
- that you are familiar with all the instructions,
- that all users of the machine have been informed of and have understood the instructions.

Also observe the safety and operating instructions in the manual for the lawn tractor which these machine is attached to.

Safety instructions

⚠ ***Danger of injury***

Before all work on this machine

(such as, e.g. attachment / removal, assembly, testing, checking, maintenance / adjustment work etc.)
- stop the engine of the lawn tractor,
- remove the ignition key
- wait until all moving parts have come to a complete stop; the engine must be cooled down
- engage the parking brake
- remove the spark plug connectors on the lawn tractor so that accidental starting of the engine is not possible.

During use

⚠ ***Danger of injury***

- Keep persons, especially children, and pets away from the usage area of the machine.

Use the machine properly

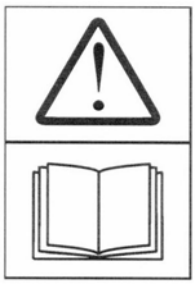
This machine is intended for use
– as a front sweeper for lawn tractors for sweeping domestic and leisure property
– according to the specifications and safety instructions contained in this operating manual.
Any other use shall be deemed to be improper use. The user is liable for all damage to third parties and their property. Unauthorised modifications to the machine shall exclude any liability of the manufacturer from any damage which may result.

Position information
For position information on the machine (e.g. left, right) we always assume as seen from the driver's seat in the working direction of the machine.

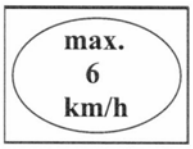
Operation
The maximum speed of 6 km/h must not be exceeded.
Never carry out assembly, testing, checking, maintenance / adjustment work etc. while the engine is running or hot.
If an object is struck or if the front sweeper starts to make unusual vibrations: stop the engine immediately and examine the machine for damage. Contact a specialist repair shop in the case of damage.

Before every use
Always check the front sweeper for any damage or wear.
The front sweeper must only be used when in perfect working order.
Check all controls, brackets and threaded connections for damage and firm seating. Replace any damaged parts before operation.
The area to be swept must previously have been cleared of large objects. Stones, wire, pieces of wood etc. can be ejected in an uncontrolled way from the sweeper under certain circumstances.

Signs on the machine



Important:
Read the operating instructions before starting up.



Important:
Danger of injury / damage to the machine. The maximum speed of 6 km/h must not be exceeded.

Keep third parties out of the danger zone.

Always keep these signs on the machine in a legible condition.

Maintenance

Only allow maintenance work / repairs to be carried out by a specialist workshop.
Only use original spare parts or spare parts which have been approved by the manufacturer.

Technical data

Width:	1000 mm
Height without guide:	480 mm
Length (without sweepings container):	880 mm
Weight:	48.5 kg
Sweeping width:	1000 mm
Brush diameter:	330 mm

Warranty

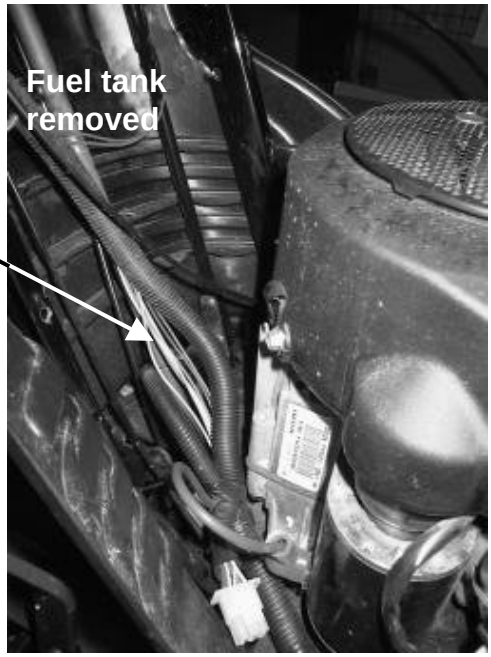
The warranty conditions issued by our company or. the importer apply in every country.
We rectify defects on your machine according to the warranty conditions at no charge provided the cause can be attributed to material or manufacturing defects.
In the case of a warranty claim, please contact your sales representative or the nearest subsidiary.

Mounting

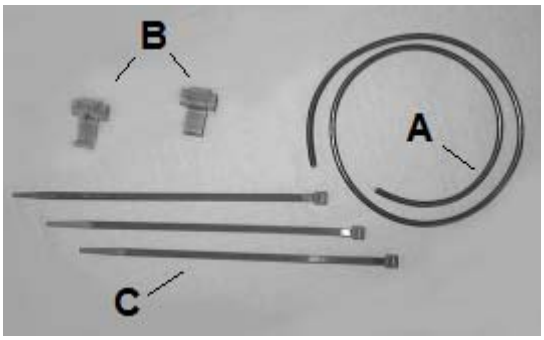
Preparing the lawn tractor for mounting the front sweeper

⚠ *For technical safety reasons, a cable bridge according to the instructions below must be installed for the attachment of the sweeper. The installed cable bridge between brake switch and seat safety switch ensures that the engine always automatically switches off as soon as the operator leaves the driver's seat.*

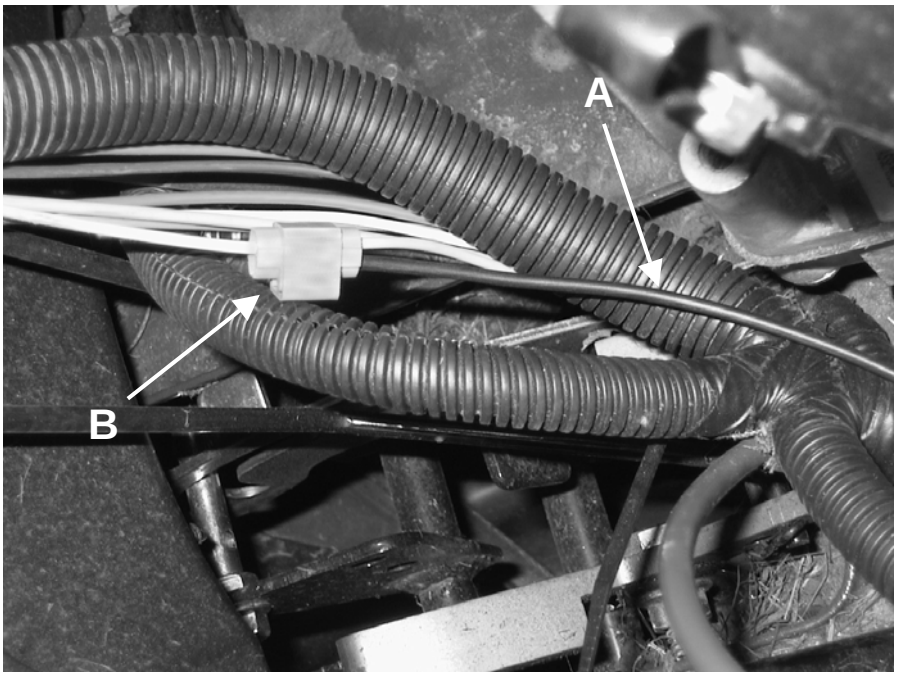
1. Open the engine cover and if necessary remove the right-hand side panel and / or the fuel tank (depending on the design) in order to access the cable harness.
2. Open the black cable harness sheath from the wiring harness to the ignition switch (underneath the fuel tank) and expose **the yellow cable**.



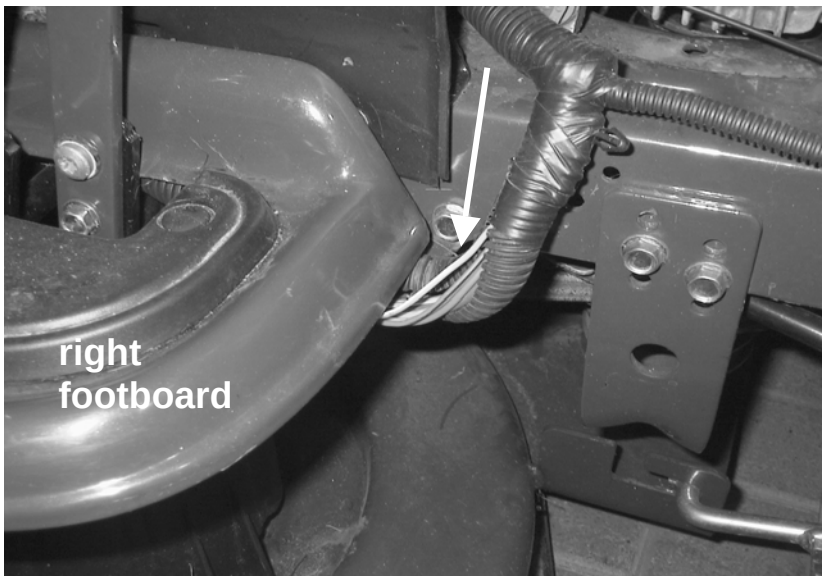
Electrical accessories:
A = vehicle cable 1.5 mm²
B = branch connector, blue
C = cable tie



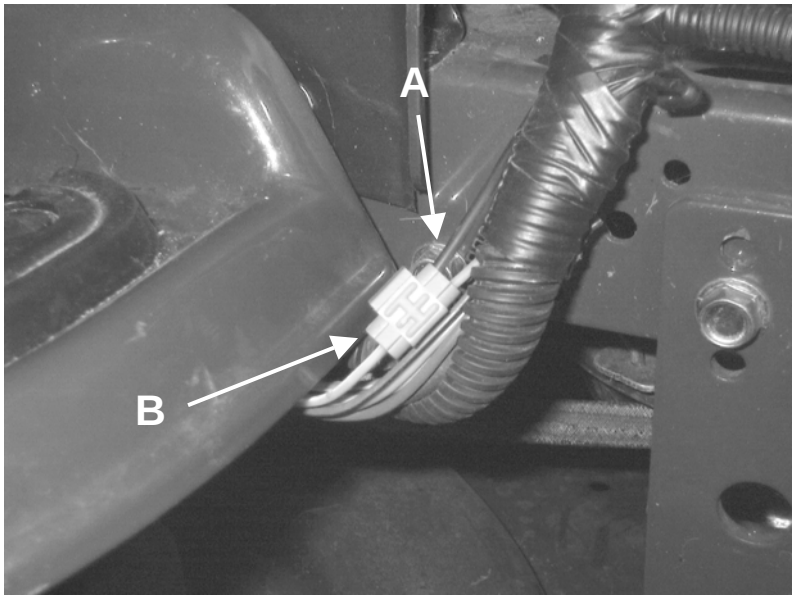
3. Connect cable "A" to the yellow cable with a branch connector "B"



4. Open the black cable harness sheath from the wiring harness to the brake switch (between step and frame) and expose the yellow/white cable.

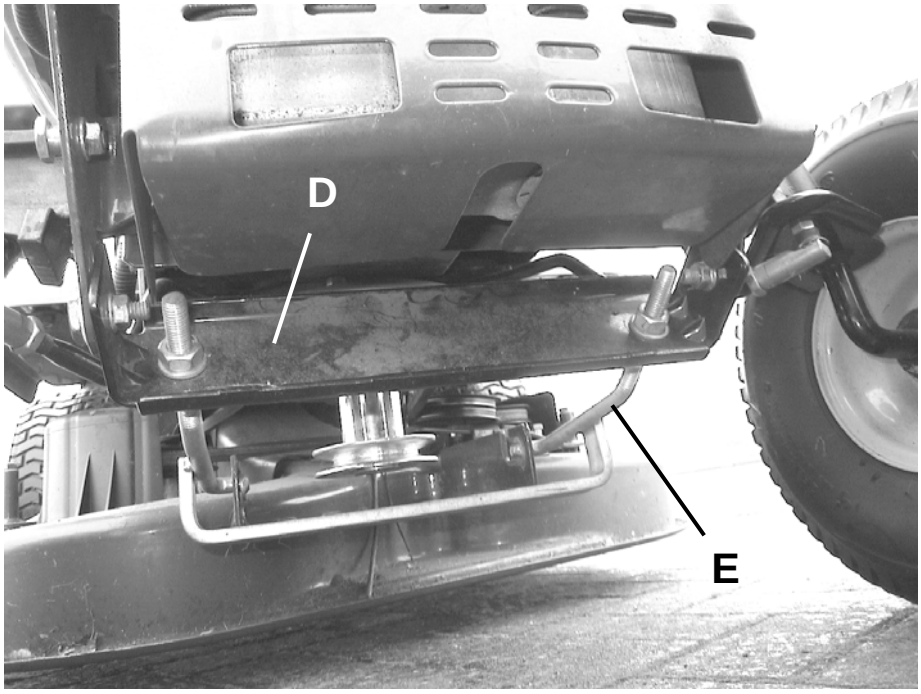


5. Connect the free end of cable "A" to the yellow/white cable with a branch connector "B".



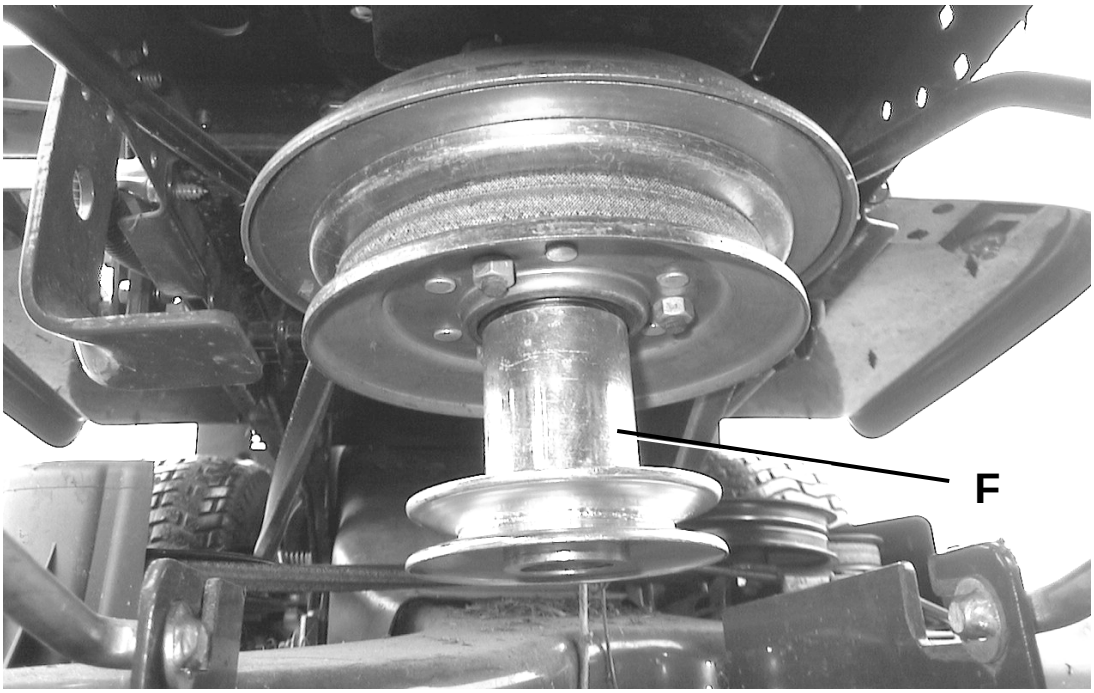
6. Press all the cables back into the cable harness sheath and fasten the cable "A" in parallel with the cable harness using 3 cable ties.
7. Replace right-hand side panel and/or fuel tank (depending on design).
8. It is necessary to limit the lift-up height of the mower deck due to the additional V-belt pulley under the engine. An M12x25 bolt with 2 large washers and a lock nut are mounted on the lever connecting link for this.

9. Lower the mower on to e.g. squared timber so that the strain relief clamp on the front side of the deck is not stressed.
10. Unbolt the strain relief clamp from the cross member "D" on the front of the machine and replace it with the supplied deck suspension "E". Re-adjust the tension distance according to the original strain relief clamp.



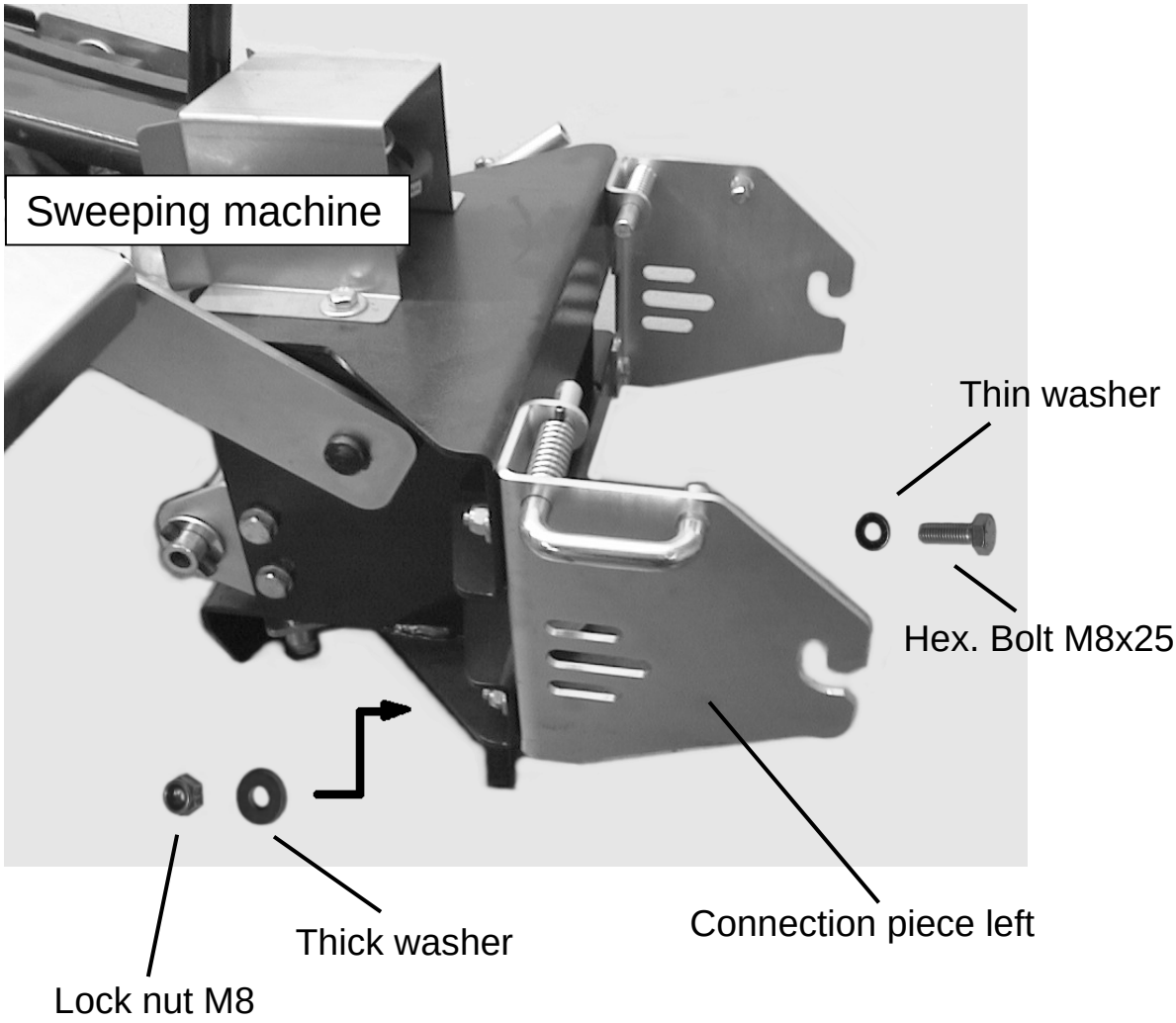
View from front right

11. Undo the fixing bolt of the engine V-belt pulley. Position the supplied V-belt pulley "F" so that the pins on the spanner flats of the coupling nut act as drivers. Fix everything with the whitworth bolt also supplied. Tightening torque 51-68 Nm.

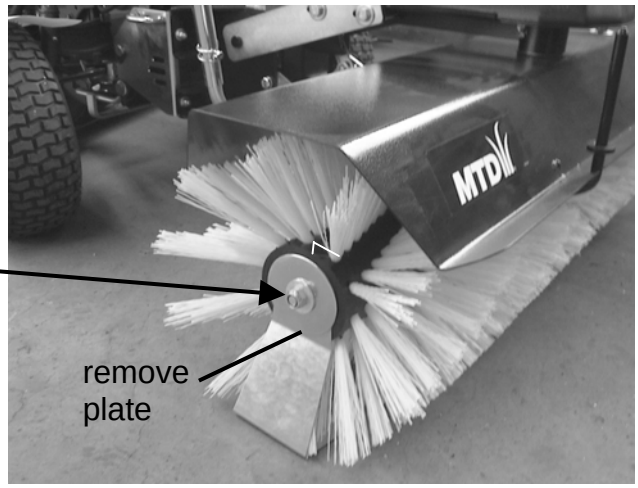


12. Perform a test run and functional check - ensure that the engine always stops automatically as soon as the operator leaves the driver's seat.

13. Before the sweeper can be coupled, the connection pieces for the MTD ***"Fast Attach System"*** must be bolted on. Match the parts to the correct side according to the illustration and attach each part using 2 bolts, 2 washers and 2 nuts.

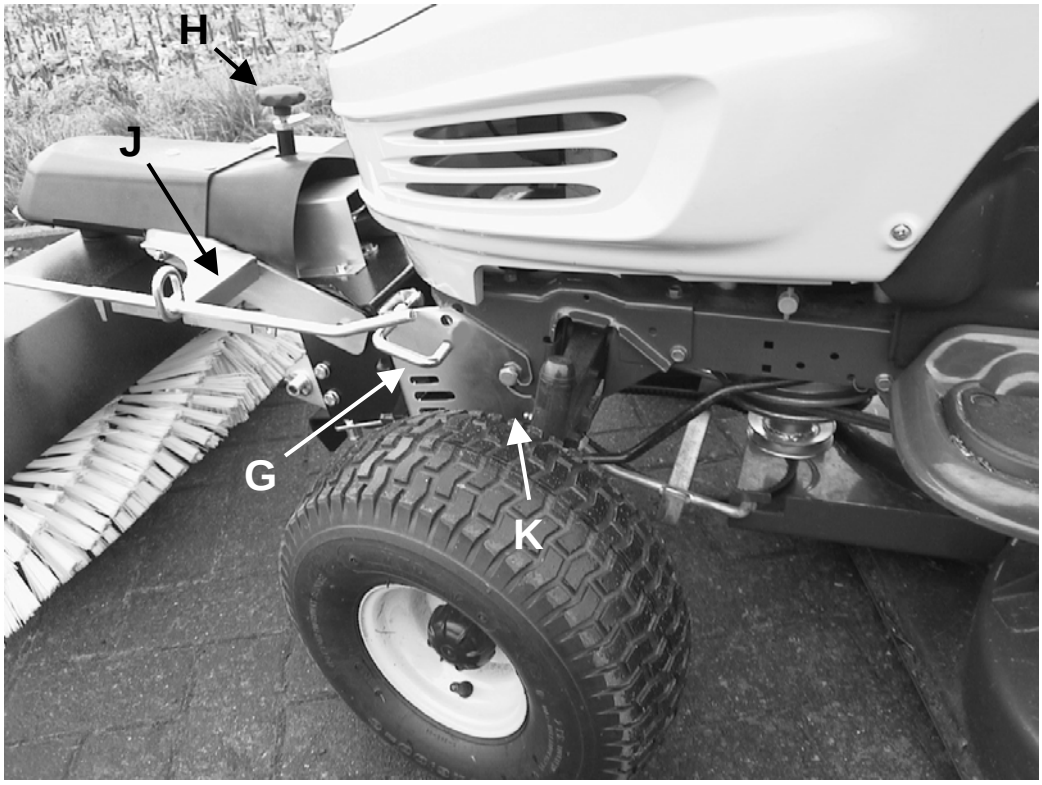


14. Finally, the support plates, which protect the brushes during transport and during storage in the carton against compressed areas, on the ends of the brush on the right and left must be removed.
Undo the nut of the brush axle by approx. 3 turns using a ring spanner SW 19 and remove the plates. Carefully tighten the nut again afterwards. Check the tightness after 1 hour of operation.

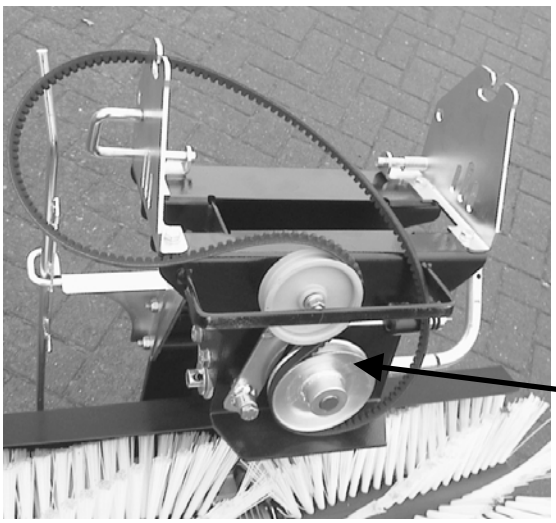


Attachment of the front sweeper

1. Place the sweeper in position in front of the lawn tractor. Turn the locking element "G" flat as shown in the picture. Hold the knob "H" with your left hand and the bracket "J" with your right hand and lift the hook ends of the connecting plates onto the bolts of the ***Fast-Attach-System*** "K".

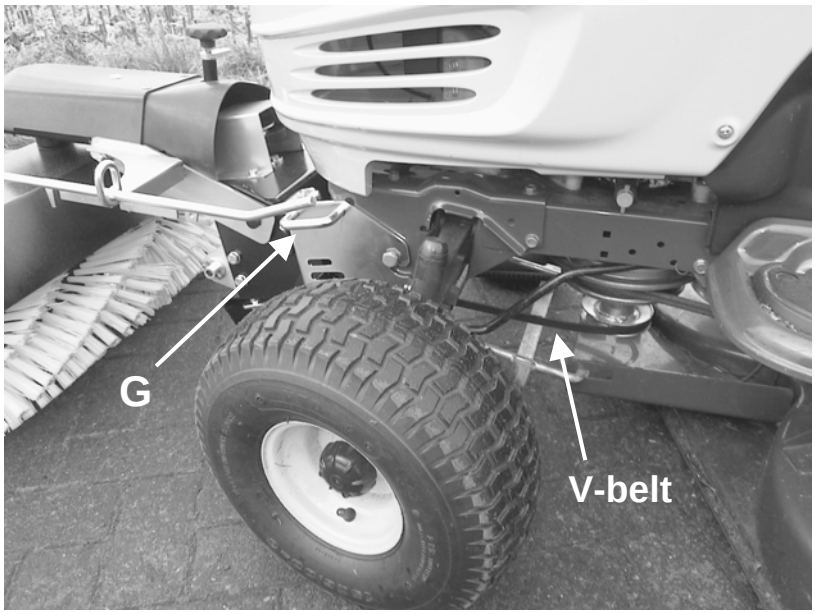


2. In the next step, you place the V-belt on the extra pulley as shown in the picture.
(Put the mower deck in a low position)

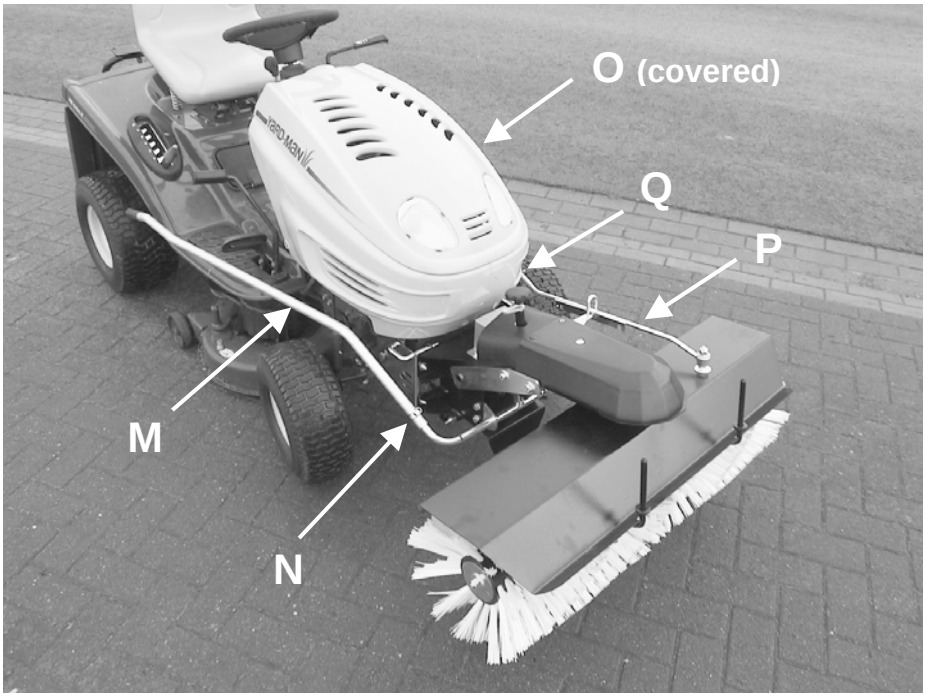


Make sure that the V-belt runs round the tension roller as illustrated.

3. Now swivel the locking elements "G" so that they engage in the holes of the side plates. Go in front of the sweeper, hold the front edge of the brush deck and lift this until the locking elements audibly engage in the tractor bore holes of the ***Fast-Attach-System***. The sweeper is coupled and the V-belt to the tractor has been correctly tensioned by the spring-mounted tensioner.



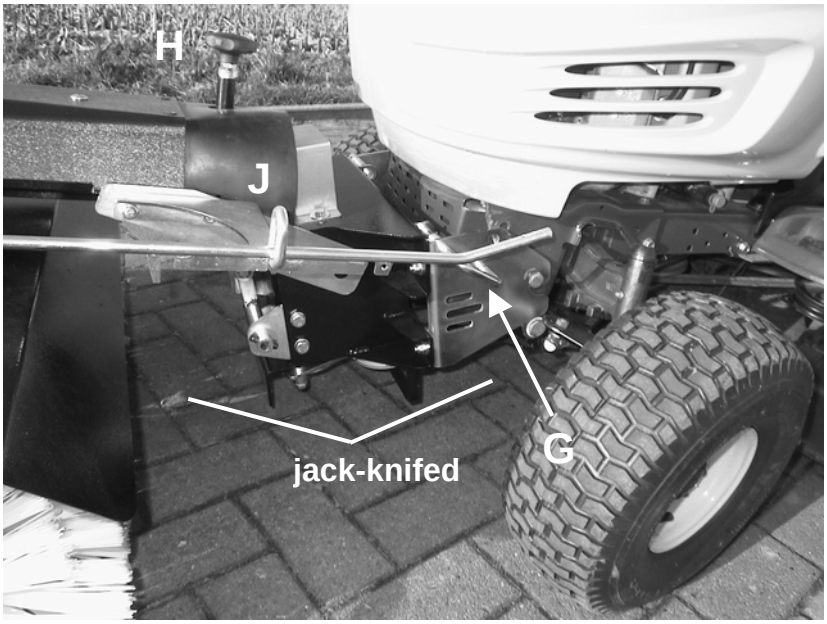
4. Push the lifting tube "M" onto the lever of the sweeper on the right-hand side. A tube hinged pin is used for locking. On the left-hand side, the extension tube "O" must be put on the swivel rod "P" and locked with a spring cotter "Q". The angled handle end of the tube should face upwards.



Removal of the front sweeper

1. Switch off the engine of the tractor. The sweeper is raised.
   ⚠ **Wait until all parts are at a standstill. Let the exhaust area cool down or use suitable work gloves.**

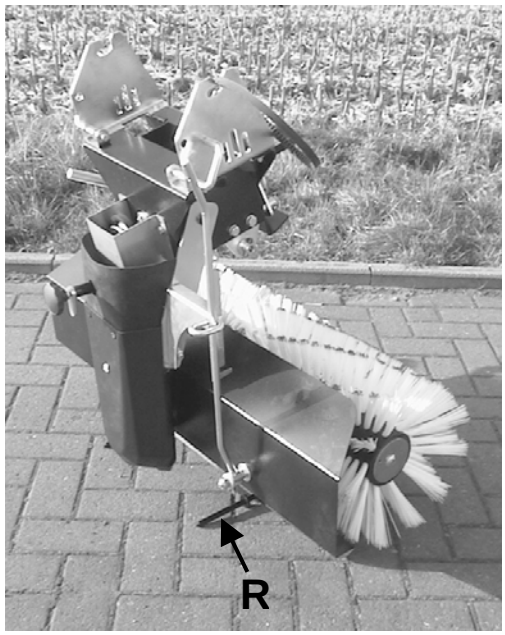
   Remove the lifting tube and the extension tube of the swivel rod from the sweeper.
   In order to pull out the locking elements "G" of the ***Fast-Attach-System*** and to fold on to the sides, hold the front edge of the brush deck and lift this at the same time.
   Lower the sweeper on to the ground. The machine is now jack-knifed (photo). The V-belt is not tensioned.



2. Set the mower deck in a low position and remove the V-belt from the additional pulley. Let it simply lie underneath.
   The same as for attachment, hold the sweeper again with the knob "H" and the bracket "J" and lift it upward to the front out of the ***Fast-Attach-System***.

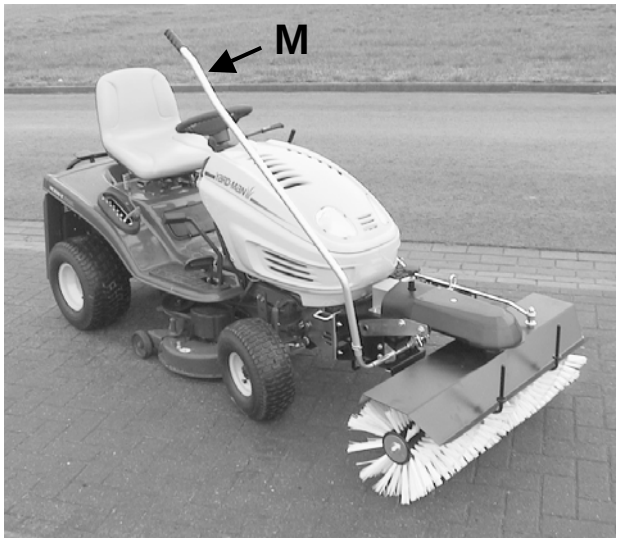
Storage / Not in use

When **not in use**, the sweeper should be placed vertically saving space on the brackets "R".
In this way, the **brushes are not stressed** and do not acquire any flat places.

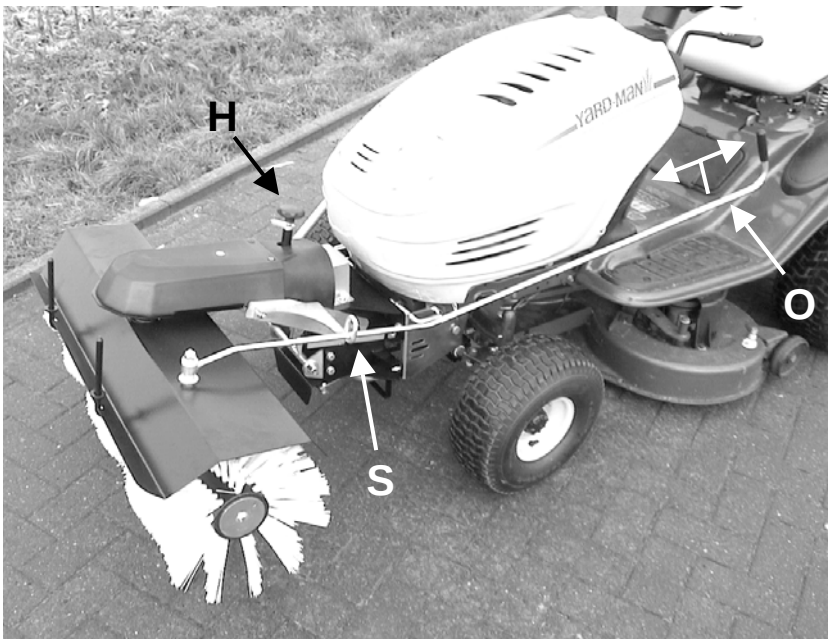


Operation of the front sweeper

1. The sweeper is raised or lowered with the lifting tube "M".
   For **raising**, the bar is simply moved up and down in relation to the step using the handle until the sweeper completely engages in the "top position".
   For **lowering**, the bar is lifted at the handle. After a slight resistance, the lowering occurs slowly.

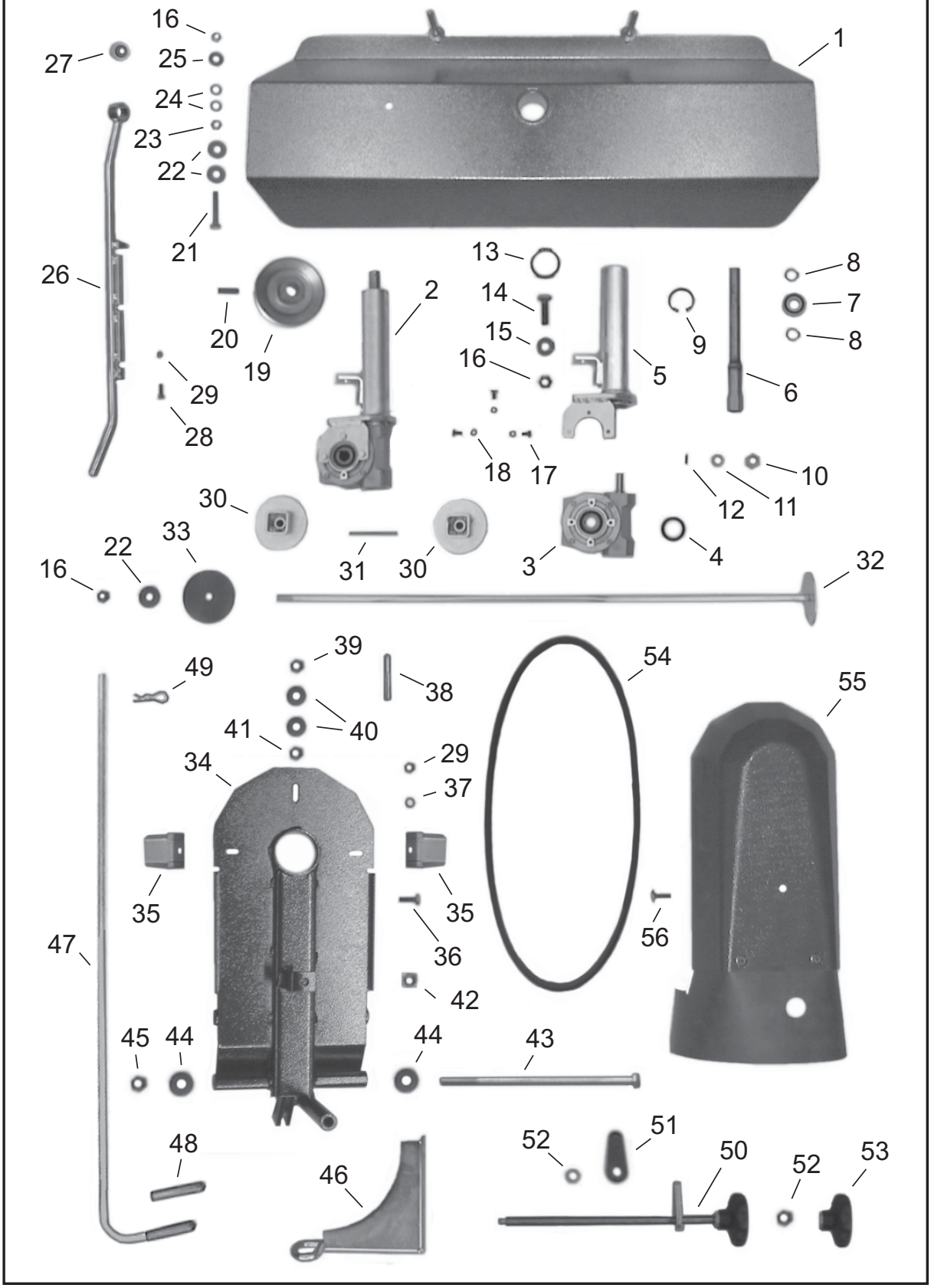


2. For **swivelling** the brush deck, hold the handle of the extension tube of the swivel rod "O", lift it upwards and move it forwards or backwards in order to swivel to the left or to the right. The locking comb "S" locks the respective position when you release the bar.
   Note: If you raise the sweeper slightly, the swivelling is very easy.



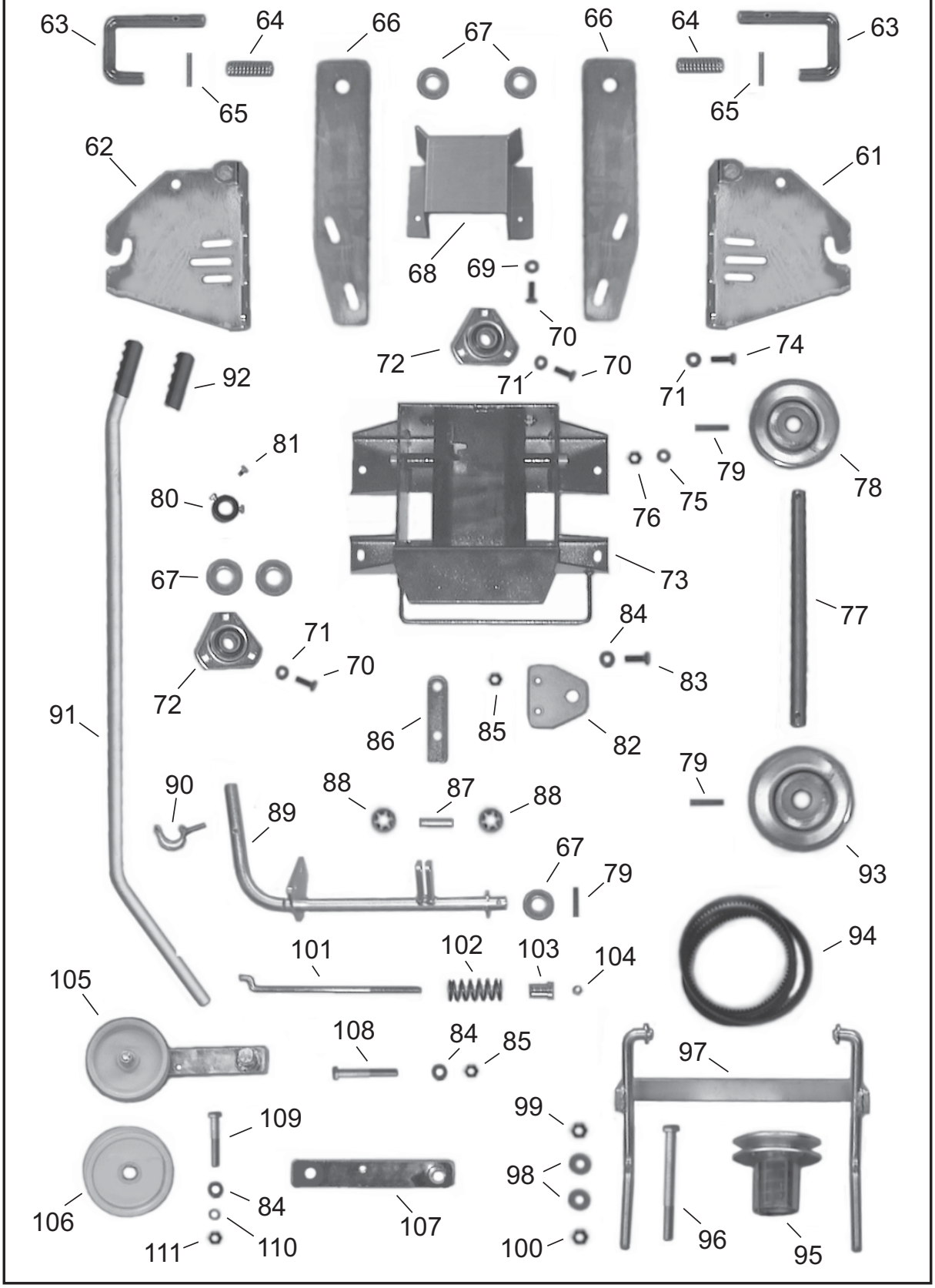
3. The **height adjustment** of the brush is made using the knob "H". Undo the locking plate by turning anticlockwise and adjust the height. The running brush should be pressed approx. **15-20 mm** on flat terrain.

MTD FK 105 Spare Parts List Tafel 1



MTD FK 105	Spare Parts List				Tafel 1
Pos.	Artikel-Nr.	Bezeichnung	Pos.	Artikel-Nr.	Bezeichnung
ohne Abb.	4HM-Q06	Kehrbürstenwalze 33-10P (2x =1m)	36	4HO-A08 Z1	6kt-Schraube M6x16
1	FKT-167	Bürstendeck MTD 100	37	4HW-B06 Z1	Scheibe, groß Ø 6
2	FKT-261	Bürstengetriebe MTD	38	4KC-B56	Führungsstift
3	4KB-S05	Schneckengetr. VF44	39	4HR-A08 Z1	Mutter M8
4	4HL-A02	Simmering 30	40	4HW-B08 Z1	Scheibe, groß Ø 8
5	FKT-164 Z	Halslager MTD	41	4HR-C08 Z1	Stopmutter M8
6	FKT-165	Bü-Welle MTD	42	4HR-I08 Z1	Käfigmutter M8
7	4HA-A20	Kugellager (6004 2RS)	43	4HO-C101 Z	6kt-Schraube M10x240
8	4HU-A20 1	Sicherungsring 20	44	4HW-B10 Z1	Scheibe, groß Ø 10
9	4HU-I42 1	Sicherungsring 42	45	4HR-C10 Z1	Stopmutter M10
10	4DS-C01	K-Stück 22	46	FKT-155 Z	Stützöse M1
11	4DM-B15 Z	Distanzrohr	47	4AZ-122	Schwenkrohr
12	4KH-P04	Paßfeder	48	4HJ-G02	Griffhülle 15
13	4HU-A50 1	Sicherungsring 50	49	4KC-F01	Federstecker A
14	4HO-A34 Z1	6kt-Schraube M12x30	50	4AZ-128	Stützspindel M1
15	4HW-D12 Z1	Scheibe, dick Ø12	51	4DA-I01 Z	Konterlasche
16	4HR-C12 Z1	Stopmutter M12	52	4HW-A10 Z1	Scheibe Ø 10
17	4HO-A07 Z1	6kt-Schraube M6x12	53	4HJ-B07	Knauf
18	4HW-F06 Z1	Federring M6	54	4HB-A41	Keilriemen, oben
19	4AZ-A13 Z	Keilriemenscheibe 118	55	FKT-258	K-Abdeckung
20	4HX-H36 1	Spannhülse 8x36	56	4HO-S47 Z	Bordwandschr. M8x15
21	4HO-A61 Z	6kt-Schraube M12x65			
22	4HW-B12 Z1	Scheibe, groß Ø 12			
23	4HR-A12 Z1	Mutter M12			
24	4HW-A12 Z1	Scheibe, Ø 12			
25	4HJ-D02 1	Kunststoff-Scheibe			
26	FKT-259	Schwenkstütze M1 kpl.			
27	4HK-S01	Silentblock			
28	4HO-A09 Z1	6kt-Schraube M6x20			
29	4HR-C06 Z1	Stopmutter M6			
30	4AZ-107 Z	Bürstenmitnehmer 44			Endet eine Art.-Nr. mit einer angehängten "1", so ist die VE = 10 St.
31	4DC-B01	Mitnehmerstab			
32	4AZ-129 Z	Bürstenachse 1m			
33	4DA-E03 Z	Scheibe			
34	FKT-151	Bürstenträger M1			
35	4DA-C91 Z	K-Führung MD			

MTD FK 105	Spare Parts List	Tafel 2



MTD FK 105		Spare Parts List			Tafel 2
Pos.	Artikel-Nr.	Bezeichnung	Pos.	Artikel-Nr.	Bezeichnung
61	4DA-G27 Z	Kupplungsblech MTD li.	97	FTS-179 Z	Zugbügel M500
62	4DA-G26 Z	Kupplungsblech MTD re.	98	4HW-B12 Z1	Scheibe, groß Ø 12
63	4DC-F60 Z	Riegel MD	99	4HR-A12 Z1	Mutter M12
64	4HI-B07 Z	Druckfeder MD	100	4HR-C12 Z1	Stopmutter M12
65	4HX-E22	Spannhülse 4x22	101	4DC-C20 Z	Zugstange M1
66	4DA-I07 Z	Ü-Lasche	102	4HI-B01	Druckfeder 17/54
67	4HW-A20 Z1	Scheibe Ø 21	103	4DC-J12 Z	Federdruckstück M1
68	4DA-C90 Z	Stützschutz MD	104	4HR-C06 Z1	Stopmutter M6
69	4HW-B08 Z1	Scheibe, groß Ø 8	105	FKT-253	Spanner M1 kpl.
70	4HO-A14 Z1	6kt-Schraube M8x20	106	4AZ-205	Spannrolle B2
71	4HW-A08 Z1	Scheibe Ø 8	107	FKT-153 Z	Spannerarm M1
72	4HA-Y20	Y-Lager 20	108	4HO-C31 Z1	6kt-Schraube M10x60
73	FKT-150	Wellengehäuse M1	109	4HO-M53 Z	Zoll-Schraube UNF175
74	4HO-A15 Z1	6kt-Schraube M8x25	110	4HW-F10 Z1	Federring M 10
75	4HW-D08 Z1	Scheibe, dick Ø 8	111	4HR-A51 Z1	Zollmutter 3/8" UNF
76	4HR-C08 Z1	Stopmutter M8			
77	4DC-H55	V-Welle M1			
78	4AZ-A07 Z	Keilriemenscheibe 80			
79	4HX-H36 1	Spannhülse 8x36			
80	4KC-A03 Z	Stellring 20			
81	4HO-A06 Z1	6kt-Schraube M6x10			
82	4DA-H06 Z	Lagerplatte			
83	4HO-A23 Z1	6kt-Schraube M10x20			
84	4HW-A10 Z1	Scheibe, Ø 10			
85	4HR-C10 Z1	Stopmutter M10			
86	4DB-D02 Z	Lasche			
87	4DC-F17 Z	Bolzen			
88	4KC-A15	Federscheibe 12			
89	FKT-152 Z	Ausheber M1			
90	4AZ-802	Rohrklappsplint 6/32			
91	FKT-260	Heberohr M1			Endet eine Art.-Nr. mit einer angehängten "1", so ist die VE = 10 St.
92	4HJ-G03	Handgriff			
93	4AZ-A30 Z	Keilriemenscheibe 100			
94	4HB-X32 S	Keilriemen, unten			
95	4AZ-A68 Z	Motor-K-Scheibe M1			
96	4HO-M57	Zoll-Schraube UNF 65			